

§Appl. No. 10/030,701
Amdt. dated August 17, 2004
Reply to Office Action of, May 17, 2004

Listing of Claims:

Please **amend** the claims as follows:

Claim 1 (Currently Amended) An isolated polypeptide selected from one of the groups consisting of:

- (a) an isolated polypeptide encoded by a polynucleotide comprising ~~thesequence~~ the sequence of SEQ ID NO:1;
- (b) an isolated polypeptide comprising a polypeptide sequence having at least 95% identity to the polypeptide sequence of SEQ ID NO:2 and which is coded for by a polynucleotide which hybridizes to SEQ ID NO: 1 under stringent conditions comprising overnight incubation at 42°C in a solution comprising 50% formamide, 5xSSC (150mM NaCl, 15mM trisodium citrate), 50 mM sodium phosphate (pH7.6), 5x Denhardt's solution, 10% dextran sulfate, and 20 microgram/ml denatured, sheared salmon sperm DNA; followed by washing the filters in 0.1x SSC at about 65°C.
- (c) an isolated polypeptide having at least 95% identity to the polypeptide sequence of SEQ ID NO:2 and which is coded for by a polynucleotide which hybridizes to SEQ ID NO: 1 under stringent conditions comprising overnight incubation at 42°C in a solution comprising 50% formamide, 5xSSC (150mM NaCl, 15mM trisodium citrate), 50 mM sodium phosphate (pH7.6), 5x Denhardt's solution, 10% dextran sulfate, and 20 microgram/ml denatured, sheared salmon sperm DNA; followed by washing the filters in 0.1x SSC at about 65°C; and
- (d) the polypeptide sequence of SEQ ID NO:2, and
- (e) specific fragments ~~and variants~~ of such polypeptides in (a) to (d).

§Appl. No. 10/030,701
Amdt. dated August 17, 2004
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Claim 2 (Original) The isolated polypeptide as claimed in claim 1 comprising the polypeptide sequence of SEQ ID NO:2.

Claim 3 (Original) The isolated polypeptide as claimed in claim 1 which is the polypeptide sequence of SEQ ID NO:2.

Claim 4 (Currently Amended) An isolated polynucleotide selected from one of the groups consisting of:

(a) an isolated polynucleotide comprising a polynucleotide sequence having at least 95% identity to the polynucleotide sequence of SEQ ID NO:1 and which hybridizes to SEQ ID NO: 1 under stringent conditions comprising overnight incubation at 42°C in a solution comprising 50% formamide, 5xSSC (150mM NaCl, 15mM trisodium citrate), 50 mM sodium phosphate (pH7.6), 5x Denhardt's solution, 10% dextran sulfate, and 20 microgram/ml denatured, sheared salmon sperm DNA; followed by washing the filters in 0.1x SSC at about 65°C;

(b) an isolated polynucleotide having at least 95% identity to the polynucleotide of SEQ ID NO:1 and which hybridizes to SEQ ID NO: 1 under stringent conditions comprising overnight incubation at 42°C in a solution comprising 50% formamide, 5xSSC (150mM NaCl, 15mM trisodium citrate), 50 mM sodium phosphate (pH7.6), 5x Denhardt's solution, 10% dextran sulfate, and 20 microgram/ml denatured, sheared salmon sperm DNA; followed by washing the filters in 0.1x SSC at about 65°C;

(c) an isolated polynucleotide comprising a polynucleotide sequence encoding a polypeptide sequence having at least 95% identity to the polypeptide sequence of SEQ ID NO:2 and which hybridizes to SEQ ID NO: 1 under stringent conditions comprising overnight incubation at 42°C in a solution comprising 50% formamide, 5xSSC (150mM NaCl, 15mM trisodium citrate), 50 mM sodium phosphate (pH7.6), 5x Denhardt's solution, 10% dextran sulfate, and 20 microgram/ml denatured, sheared salmon sperm DNA; followed by washing the filters in 0.1x SSC at about 65°C;

§Appl. No. 10/030,701
Amdt. dated August 17, 2004
Reply to Office Action of, May 17, 2004

(d) an isolated polynucleotide having a polynucleotide sequence encoding a polypeptide sequence having at least 95% identity to the polypeptide sequence of SEQ ID NO:2 and which hybridizes to SEQ ID NO: 1 under stringent conditions comprising overnight incubation at 42°C in a solution comprising 50% formamide, 5xSSC (150mM NaCl, 15mM trisodium citrate), 50 mM sodium phosphate (pH7.6), 5x Denhardt's solution, 10% dextran sulfate, and 20 microgram/ml denatured, sheared salmon sperm DNA; followed by washing the filters in 0.1x SSC at about 65°C;

~~(e) an isolated polynucleotide with a nucleotide sequence of at least 100 nucleotides obtained by screening a library under stringent hybridization conditions with a labeled probe having the sequence of SEQ ID NO: 1 or a fragment thereof having at least 15 nucleotides;~~

~~(f) (e)~~ a polynucleotide which is the RNA equivalent of a polynucleotide of (a) to (d) ~~(e)~~;

or a polynucleotide sequence complementary to said isolated polynucleotide; and

(f) polynucleotides that are ~~variants~~ and specific fragments of the above mentioned polynucleotides ~~or that are complementary to above mentioned polynucleotides, over the entire length thereof.~~

Claim 5 (Currently Amended) An isolated polynucleotide ~~as claimed in claim 4~~ selected from the group consisting of:

(a) an isolated polynucleotide comprising the polynucleotide of SEQ ID NO:1;

(b) the isolated polynucleotide of SEQ ID NO:1;

(c) an isolated polynucleotide comprising a polynucleotide sequence encoding the polypeptide of SEQ ID NO:2; and

(d) an isolated polynucleotide encoding the polypeptide of SEQ ID NO:2.

Claim 6 (Original) An expression system comprising a polynucleotide capable of producing a polypeptide of claim 1 when said expression vector is present in a compatible host cell.

Claim 7 (Previously Presented) A recombinant host cell comprising the expression vector of claim 6 or a membrane thereof expressing the polypeptide of an isolated polypeptide selected from one of the groups consisting of:

- (a) an isolated polypeptide encoded by a polynucleotide comprising the sequence of SEQ ID NO: 1;
- (b) an isolated polypeptide comprising a polypeptide sequence having at least 95% identity to the polypeptide sequence of SEQ ID NO:2; and
- (c) and isolated polypeptide having at least 95% identity to the polypeptide sequence of SEQ ID NO:2; and
- (d) the polypeptide sequence of SEQ ID NO:2 and
- (e) fragments and variants of such polypeptides in (a) to (d).

Claim 8 (Previously Presented) A process for producing an isolated polypeptide selected from one of the groups consisting of:

- (a) an isolated polypeptide encoded by a polynucleotide comprising the sequence of SEQ ID NO: 1;
- (b) an isolated polypeptide comprising a polypeptide sequence having at least 95% identity to the polypeptide sequence of SEQ ID NO:2; and
- (c) and isolated polypeptide having at least 95% identity to the polypeptide sequence of SEQ ID NO:2; and
- (d) the polypeptide sequence of SEQ ID NO:2 and
- (e) fragments and variants of such polypeptides in (a) to (d);

§Appl. No. 10/030,701
Amdt. dated August 17, 2004
Reply to Office Action of, May 17, 2004

comprising the step of culturing a host cell as defined in claim 7 under conditions sufficient for the production of said polypeptide and recovering the polypeptide from the culture medium.

Claim 9 (Original) A fusion protein consisting of the Immunoglobulin Fc-region and any one polypeptide of claim 1.

Claim 10 (Withdrawn) An antibody immunospecific for the polypeptide of claim 1.

Claim 11 (Withdrawn) A method for screening to identify compounds that stimulate or inhibit the function or level of the polypeptide of claim 1 comprising a method selected from the group consisting of:

- (a) measuring or, detecting, quantitatively or qualitatively, the binding of a candidate compound to the polypeptide (or to the cells or membranes expressing the polypeptide) or a fusion protein thereof by means of a label directly or indirectly associated with the candidate compound;
- (b) measuring the competition of binding of a candidate compound to the polypeptide (or to the cells or membranes expressing the polypeptide) or a fusion protein thereof in the presence of a labeled competitor;
- (c) testing whether the candidate compound results in a signal generated by activation or inhibition of the polypeptide, using detection systems appropriate to the cells or cell membranes expressing the polypeptide;
- (d) mixing a candidate compound with a solution containing a polypeptide of claim 1, to form a mixture, measuring activity of the polypeptide in the mixture, and comparing the activity of the mixture to a control mixture which contains no candidate compound; or
- (e) detecting the effect of a candidate compound on the production of mRNA encoding said polypeptide or said polypeptide in cells, using for instance, an ELISA assay, and

§Appl. No. 10/030,701
Amdt. dated August 17, 2004
Reply to Office Action of, May 17, 2004

(f) producing said compound according to biotechnological or chemical standard techniques.

Claim 12 (New) An isolated polynucleotide of claim 4 comprising greater than 15 nucleotides.

Claim 13 (New) An isolated polynucleotide of claim 4 comprising at least 20 nucleotides.

Claim 14 (New) An isolated polynucleotide of claim 4 comprising at least 50 nucleotides.

Claim 15 (New) An isolated polypeptide of claim 1 comprising greater than 5 amino acids.

Claim 16 (New) An isolated polypeptide of claim 1 comprising at least 10 amino acids.

Claim 17 (New) An isolated polypeptide of claims comprising at least 30 amino acids.

Claim 18 (New) An isolated polynucleotide of claim 1 which is human.

Claim 19 (New) An isolated polypeptide of claim 4 which is human.